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County Agent's Notes: Farming to Fit Our Brown Loam Hills - March 19, 2002

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Farming To Fit Our Brown Loam Hills….

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Since starting to work with the Mississippi State University Extension Service in 1991, I suppose the most common question I have encountered has been "What agricultural enterprise can I get into and expect to make a profit"? This is not a new question; people have been asking it since the beginning of agriculture. The answer has changed many times, as the markets for agricultural commodities has changed. At times the answer has been simple, and at other times it has been complex. Today the answer is very difficult, and it requires a willingness to look "outside the box", or beyond the things we may on the surface consider to be feasible.

While reading some material from the University of Florida, I came across a publication on the practice of producing cattle and timber on the same farm. While scanning through this I realized there might be a third dimension to this two-dimensional system; the addition of poultry. It's dangerous to dream like this sometimes because there are often hidden factors that add difficulty to an idea, but this one seems to make so much sense that I want to get some of you thinking about it too.

In the system as described, pines and bahiagrass are grown together since both of them are able to tolerate fairly low pH, a characteristic of our local soils. Bahiagrass is a little less acid-tolerant than pines, so in some cases a light application of lime may be required to bring pH up to around 5.5, at which bahiagrass grows well. This is still well below the 6.0 to 7.0 pH

levels we commonly recommend for other pasture grasses. A surprising advantage for bahiagrass in this system is that it is also fairly shade tolerant, and will grow well in the "filtered" sunlight under open stands of pines.

As you might expect, there are a few management considerations that help the system work. Where trees are planted into existing sod, some kind of soil preparation and/or herbicide application may be needed to reduce competition for the tree seedlings. Trees should be planted in a 4' x 8' x 40' pattern – four feet between trees in the row, two rows eight feet apart, and a forty foot spacing left to the next pair of rows to allow for fertilizing, mowing, haying, and other operations. Cattle should not be put in until trees are 18 to 24 inches high. During this time, hay can be harvested from the area. Only cows and calves should be kept in the area, since bulls have been found to damage the trees until they are ten to twelve feet tall. This should not present a problem for cattlemen who are already using AI breeding methods, or those who have other pastures where cows can remain with a bull until they are bred.

The way poultry fits into this system is in supplying nutrients for the grass. A standard poultry "unit" of from four to six houses should be capable of supplying enough litter to fertilize around 200 acres in this system. This saves the landowner the expense of purchasing commercial fertilizers and lime (each ton of litter contains around 300 pounds of lime) for the grass. In addition, loblolly pines have been shown to grow around 30 percent faster as a result of gaining fertility from the fertilized areas.

With this system, we might be able to achieve something we have never been able to get in this area: year-round productivity. The poultry operation is of course year-round, the trees grow year-round, and cattle can be run year-round as well. Ryegrass can also be overseeded into

the bahia for cool season grazing. The poultry operation will only occupy a few acres, and cattle may be allowed to graze near the houses in this area as well.

The only "hitch" we have with making this work is that poultry contracts have not been made available to many landowners in this area. Potential poultry producers who already have grazing lands or timberlands may want to look closely at the opportunity this system could provide. The big advantage here is that every time the feed truck arrives at the poultry operation is like getting "free" fertilizer for the grass and timber crops. The cattle convert the grass to meat (or milk), and the timber should be ready for sale in around 15 to 20 years following planting.

As with anything, especially in agriculture, there are other considerations like fire control, storm damage, fencing, harvesting the timber without destroying fences, decreased grass production in the later years as trees reach maturity, and others, but these can be managed as they present themselves. Even considering these things, the advantages "seem" to outweigh the disadvantages.

If this makes sense to you, I have copies of the original publication which goes into much more detail on all the aspects of managing both the trees and the cattle. Throwing in the poultry factor is my own idea; making this work will be up to you and me. This might be a system which finally "fits" our area. Let me know if you would like more information on this.